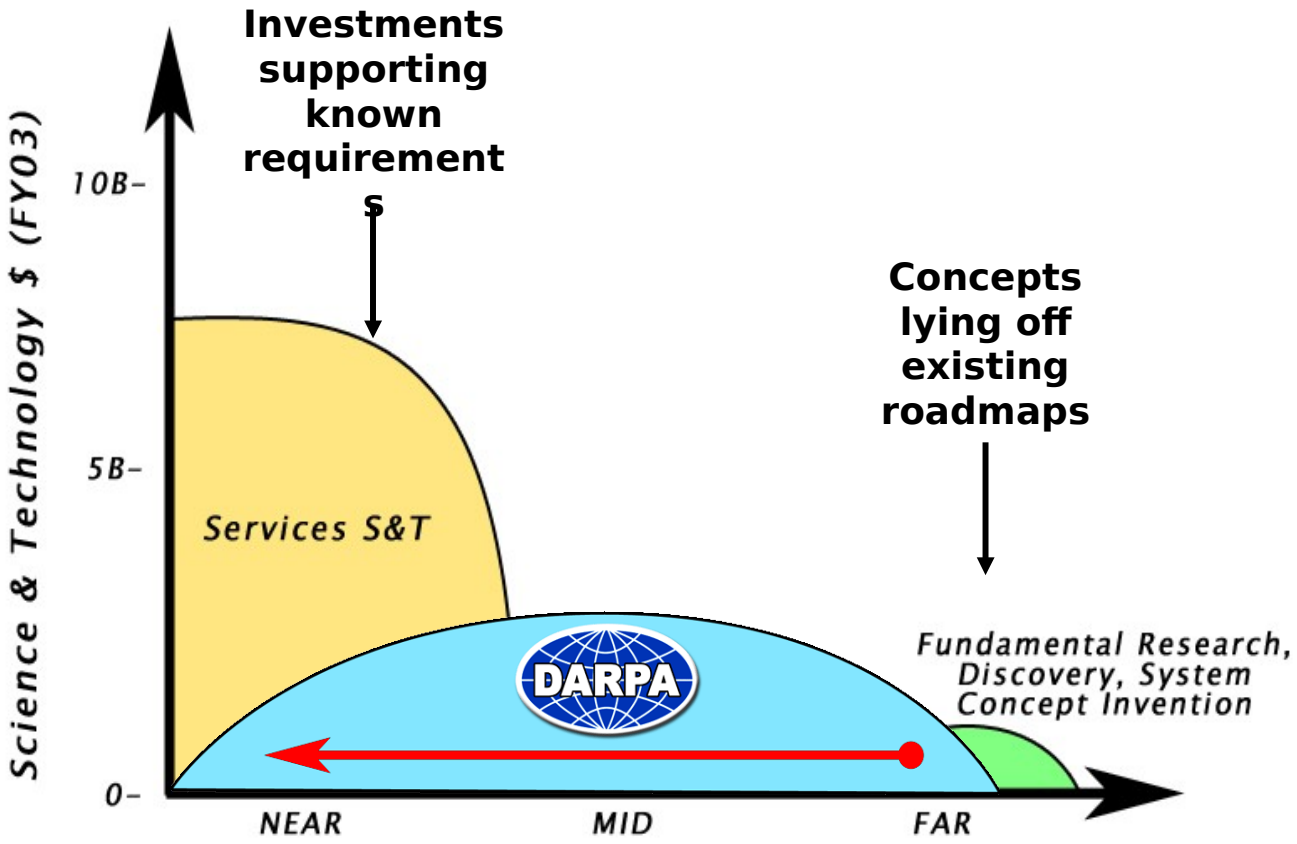
Getting Technology to the Warfighter

Bridging the Gap

From Research to Applications

Dr. Robert F. Leheny
Deputy Director

DARPA's Role in Defense Science & Technology



DARPA sponsoring revolutionary, high-payoff research that <u>bridges the gap</u> between fundamental discoveries and their military use

Maintaining the technological superiority of the U.S. military while preventing technological surprise from harming our national security

DARPA's New Initiative Process

DIRO, Program Mgr, Office, Director, Comptroller

Step III

- Program Reviews
- "Go / No Go" Evaluations

Contract

Step II

- Select Performers

BAA & SS

Step I

- Define "Go / No Go" Criteria
- Permission to Issue BAA

Program Manager

Office Director

Step 0 Initial Study

"Far-Side"
Industry
Universities
Government

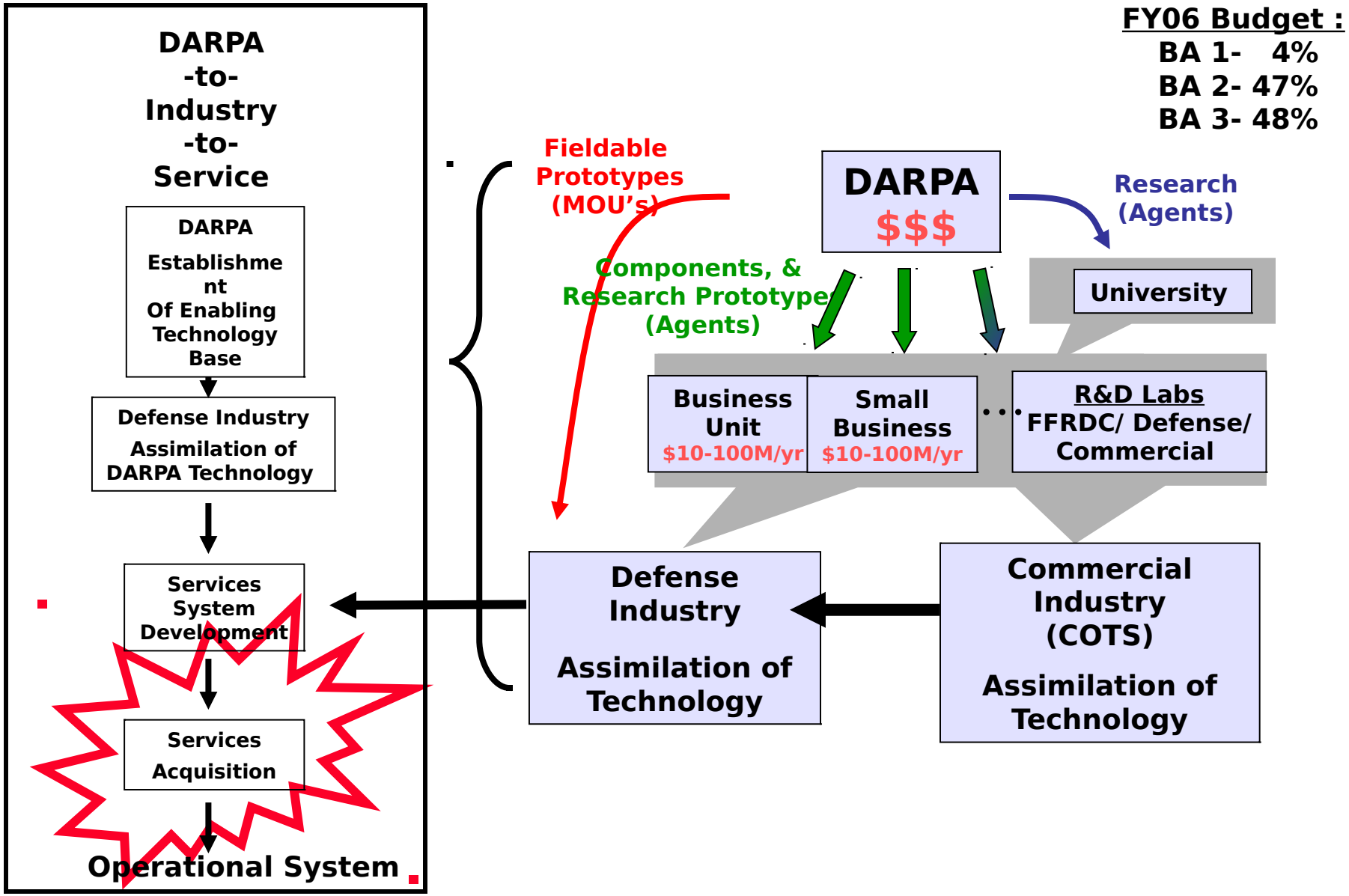
DARPA

- **Majority of PM's are not career government-**
  industry / academic
  - **Typical term at DARPA- 4-5 yrs; constant flow of new ideas**

- **>80% DARPA contracting done by other Organizations for DARPA**
  - **COTR provides corporate memory**
  - **Where appropriate Service Labs engage in test/ evaluation of contractor deliverables**

- **DARPA Challenge**
  - ***Industry* to service to procurement**

DARPA Technology Transition Strategy



DARPA's Strategic Thrusts

Investments Today for Future Capabilities

- Detection, Precision ID, Tracking, and Destruction of Elusive Surface Targets
- Location and Characterization of Underground Structures
- Force Multipliers for Urban Area Operations
- Networked Manned & Unmanned Systems
- Robust, Secure Self-Forming Tactical Networks
- Cognitive Systems
- Assured Use of Space
- Bio Revolution

DARPA Organization

Director, Tony Tether
Deputy Director, Bob Leheny

Information Exploitation
Ted Bially
Bob Tenney/Bob Popp

- **Sensors**
- **Exploitation Systems**
- **Command & Control**

Tactical Technology
Art Morrish
Gary Graham/Stephen Welby

- **Air/Space/Land Platforms**
- **Unmanned Systems**
- **Space Operations**
- **Laser Systems**
- **Future Combat Systems**
- **Planning / Logistics**

Special Projects
Amy Alving
Joe Guerci

- **Chem/Bio Def Systems**
- **Counter Underground Facilities**
- **Space Sensors/Structures**
- **Navigation/Sensors/ Signal Processing**

Advanced Technology
Dave Honey
Larry Stotts

- **Assured C3ISR**
- **Maritime**
- **Early Entry/Special Forces**

Joint Unmanned Combat Air Systems
Mike Francis

- **Common Systems & Technologies**
- **X-45 System**
- **X-47 System**

Defense Sciences
Steven Wax
Brett Giroir

- **Bio Warfare Defense Technologies**
- **Biology**
- **Materials & Devices**
- **Mathematics**

Information Processing Technology
Ron Brachman
Barbara Yoon

- **Cognitive Systems**
- **Computational - Perception**
- **Representation & Reasoning**
- **Learning**
- **Natural Communication**

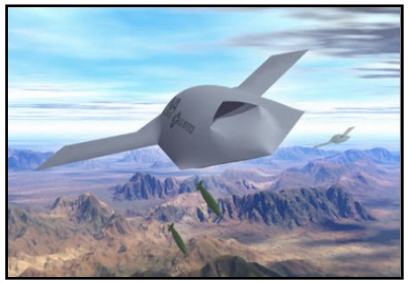
MicrosystemsTechnology
John Zolper
Dean Collins

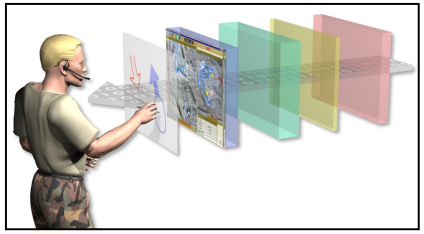
- **Electronics**
- **Optoelectronics**
- **MEMS**
- **Combined Microsystems**

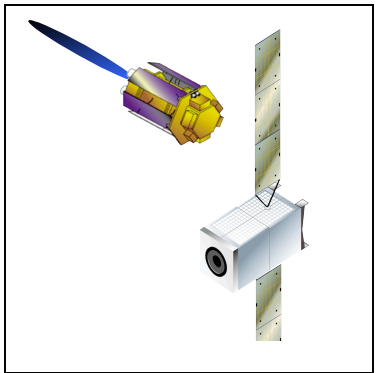
Opportunity

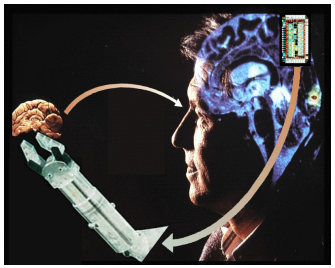
- **DARPA Always Interested in Good Ideas**
  - **Consult DARPA Strategic Plan**
  - **Talk to DARPA Program Managers**

    (www.darpa.mil)
  - **or Join DARPA as a Program Manager!**







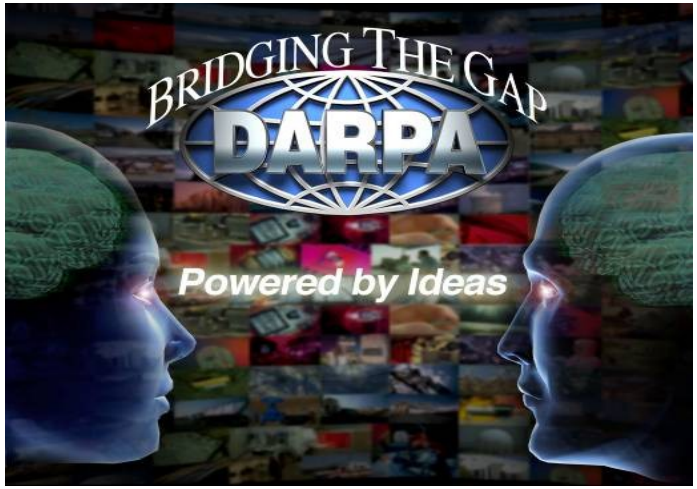


Upcoming Key DARPA Events

DARPATech 2005
24th DARPA Systems & Technology Symposium

August 9 –August 11, 2005

Anaheim, California



GRAND CHALLENGE

National Qualification Event

September 28 – October 5, 2005

Fontana Speedway

Grand Challenge Event

October 8, 2005

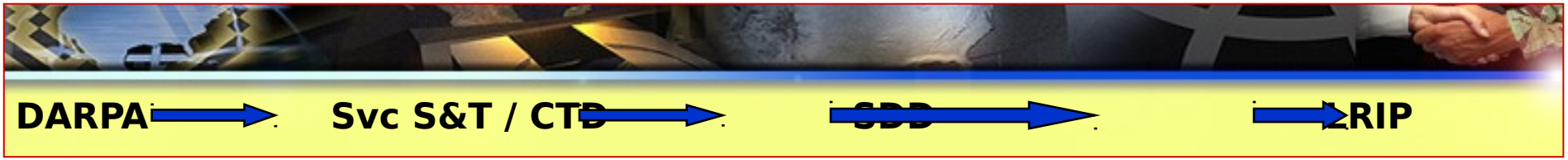
Southwestern United States

SPARKING INTEREST IN SCIENCE AND TECHNOLOGY IN AMERICA
THE DARPA
GRAND CHALLENGE
BUILD A FULLY AUTONOMOUS RUGGED TERRAIN VEHICLE

DARPA to Service Transition Acquisition Paths

DARPA

Components, small systems

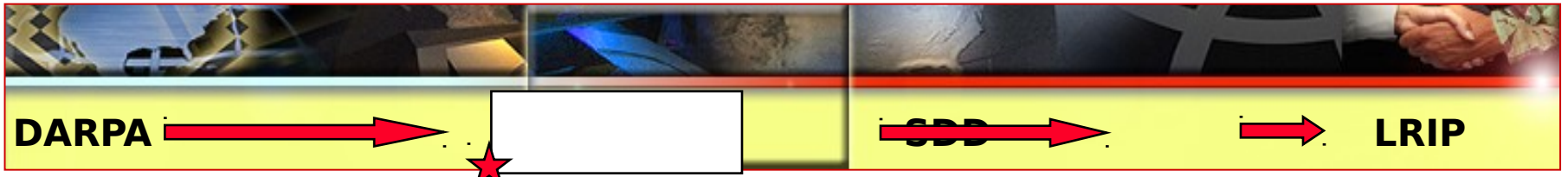


Concept and Technology Development (MS A)

System Development and Demonstration (MS B)

Low Rate of Initial Production (MS C)

Prototypes



POM submit